CHROMOSOME NUMBERS IN ASTERACEAE

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Reports of 135 new chromosome number counts are recorded for 100 species and 54 genera of Asteraceae mostly from North America. Three genera, *Tessaria* ($n = 10$), *Carramboa* ($n = 19$), and *Pelucha* ($n = 10$), and 15 species were previously unreported. Discussion is limited to those taxa for which chromosome numbers are previously unreported or those published counts that suggest a need for some elaboration. Many counts presented here confirm earlier reports listed in the chromosome number indexes edited by Federov (1969) and Moore (1973; 1974), or in other recent literature.

The chromosome numbers reported here were obtained through standard acetocarmine squashes of microsporocytes. Voucher specimens for most of the collections are deposited in TEX or SRSC. Vouchers for collections by Breedlove, Roe, and Raven are deposited in DS. Asterisks in Table 1 denote taxa for which chromosome numbers are previously unreported. Abbreviations of collectors preceding collection numbers in Table 1 include: B, Babcock; Br, Breedlove; I, Ittner; Pa, Patterson; P, Powell; R, Raven; S, Sikes; T, Tomb; Tu, Turner; W, Weedin.

Astereae — *Erigeron mimegledes* ($2n = 27$ I) was reported earlier as $2n = 36$ I by Turner and Flyr (1966) who discussed the species as possibly apomictic on a base of $x = 9$ and probably related to *E. geiseri* ($2n = 27$ I), conclusions substantiated by our count in Table 1. *Erigeron* sp. ($n = 18$; Table 1) is an undescribed species. Determinations for *Machaeranthera pinnatifida* ($n = 4, 8$; Table 1) follow Hartman (1976) and Turner and Hartman (1976).

Inuleae — The chromosome number listed in Table 1 for *Tessaria sericea* ($n = 10$) is a first report for the genus and supports what appears to be a close relationship of this genus with *Pluchea* ($x = 10$).

Heliantheae — Although the count for *Aspilia purpurea* ($n = 12$ or 13; Table 1) is tentative and differs from previous reports of $x = 14$ (Solbrig et al., 1972) and $n =$ ca. 17 (Powell and Cuatrecasas, 1970) for four other species of the genus, there is reason to suspect that this large taxon of North America, South America, and Africa might be chromosomally variable and thus amenable to cytotaxonomic investigation. *Bidens ostruthioides* ($n = 12$) has been reported previously as a tetraploid, but a diploid number for the taxon is recorded in Table 1. *Calea scabra* is reported to be $n =$ ca. 27 (Table 1) evidently on a base of $x = 9$ (Solbrig et al., 1972) although this species has been recorded previously as $n = 16, 32$ (De Jong and Longpre, 1963; Powell and Turner, 1963). The listing in Table 1 for *Coreopsis integrifolia* ($n = 13$), appar-

Table 1. Chromosome Numbers in Asteraceae.

Species	Gametic chromosome number	Locality and collection number
Eupatorieae		
Ageratina wrightii (Gray) King & Robins.	17	TEX. Hudspeth Co. Sierra Blanca Mts., *Wilson* s.n.
Ageratum nelsonii (Rob.) M. F. Johnson	10	MEX. Chiapas: 11 mi S of La Trinitaria, *Br 13269.*
Barrotea laxiflora Brandeg.	9	MEX. Sinaloa: 45 mi S of Mazatlán, *S* and *B 204.*
Carphochaete bigelovii Gray	11	TEX. Brewster Co. Chisos Mts., *Averett 240.*
Piquieria trinervia Cav.	11	MEX. San Luis Potosi: ca. 13 mi W of Ahualulco, *P* and *T 2589.*
Stevia lucida Lag. var. *lucida*	12	MEX. Durango: 3 mi NW of Morcillo, *S* and *B 374.*
Stevia ovata Willd.	ca. 33 I	MEX. Oaxaca: 3 km E of Ixtlán de Juarez, *Br 12244.*
Astereae		
Aphanostephus ramosissimus DC. var. *humilis* (Bentham) Birdsong	4	MEX. Chihuahua: 25 mi S of Jiménez, *S* and *Pa 404.*
Aphanostephus riddelii T. & G.	5	MEX. Coahuila: 43 mi NW of Múzquiz, *P, Pa,* and *I 1576.*
Aster subulatus Michx. var. *ligulatus* Shinners	5	TEX. Maverick Co. Eagle Pass, *Hudson 16.*
Astranthium purpurascens (Rob.) Larsen	8	MEX. Chiapas: Cerro San Cristóbal, *Br 13298.*
Erigeron mimegledes Shinners	27 I	MEX. Coahuila: 43 mi NW of Múzquiz, *P, Pa,* and *I 1585.*
**Erigeron* sp.	18	MEX. Coahuila: high pass E of Rancho El Jardin, *P, Pa,* and *I 1602.*
Grindelia havardii Steyerm.	12[a]	TEX. Brewster Co. 13 mi S of Alpine, *P 2453.*
Grindelia microcephala DC. var. *microcephala*	6	TEX. Dimmit Co. 10 mi S of Catarina, *P 2348;* Maverick Co. 13 mi E of Eagle Pass, *P 2349.*
Haplopappus divaricatus (Nutt.) Gray	4	TEX. Midland Co. 4 mi E of Midland, *R 19219.*
Heterotheca villosa (Pursh) Shinners	18	TEX. Hudspeth Co. 12 mi E of Van Horn, *P 2782.*
Isocoma coronopifolia Greene	6	MEX. San Luis Potosi: ca. 13 mi W of Ahualulco, *P* and *T 2587.*
Machaeranthera brevilingulata (Sch.-Bip. & Hemsl.) Turner & Horne	ca. 9	MEX. San Luis Potosi: ca. 13 mi W of Ahualulco, *P* and *T 2590.*
Machaerantha gracilis (Nutt.) Shinners	2	TEX. Brewster Co. Alpine, *Hudson 1;* 20 mi S of Alpine, *Sloan 2.*
Machaerantha gracilis (Nutt.) Shinners	2[b]	TEX. Brewster Co. Alpine, *Young 2.*
Machaeranthera gymnocephala (DC.) Shinners	4	MEX. Durango: 18 mi N of La Zarca, *S* and *B 365.*

Machaeranthera pinnatifida (Hook.) Shinners var. *chihuahuana* Turner & Hartman	4	MEX. Chihuahua: Sierra de Arbolitos, *P, Tu* and *S 2505;* TEX. Brewster Co. Big Bend Park vicinity, *Tu* s.n.
Machaeranthera pinnatifida (Hook.) Shinners var. *chihuahuana* Turner & Hartman	4[b]	TEX. Presidio Co. Charro Canyon, *P 2774.*
Machaeranthera pinnatifida (Hook.) Shinners var. *chihuahuana* Turner & Hartman	8[b]	MEX. Chihuahua: 25 mi S of Jiménez, *S* and *Pa 405.*
Machaeranthera pinnatifida (Hook.) Shinners var. *pinnatifida*	4	MEX. Coahuila: 43 mi NW of Múzquiz, *P, Pa,* and *I 1577;* TEX. Brewster Co. Alpine, *Sloan 4;* Culberson Co. 8 mi S of Van Horn, *S* and *B 324;* El Paso Co. 10 mi E of El Paso, *S* and *B 321;* Hudspeth Co. 32 mi E of El Paso, *S* and *B 322;* 37 mi E of El Paso, *S* and *B 323;* Pecos Co. 14 mi E of Ft. Stockton, *S 438; S 439;* Presidio Co. Marfa, *Foster 18.*
Machaeranthera pinnatifida (Hook.) Shinners var. *pinnatifida*	8	TEX. El Paso Co. 10 mi W of El Paso, *S* and *B 318;* Hudspeth Co. ca. 12 mi E of Dell City, *P, P,* and *W 2837.*
INULEAE		
Pluchea odorata (L.) Cass.	10	MEX. Sinaloa: 2 mi N of Mazatlán, *S* and *B 198.*
**Tessaria sericea* (Nutt.) Shinners	10	TEX. Hudspeth Co. Quitman Mts., *P, P,* and *W 2941.*
PALAFOXIINAE		
Palafoxia callosa (Nutt.) T. & G.	10	TEX. Val Verde Co. 1 mi S of Pandale, *P, P,* and *W 2965.*
Palafoxia texana DC. var. *texana*	11	TEX. Maverick Co. Eagle Pass, *Hudson 17.*
Palafoxia sphacelata (Nutt. & Torr.) Cory	12	TEX. Winkler Co. 2 mi N of Wink, *Foster 23.*
HELIANTHEAE		
Aspilia purpurea Greenm.	12 or 13	MEX. Chiapas: 19 km N of Arriaga, *Roe 853.*
Bahia pedata Gray	12	NEW MEX. DeBaca Co. Lake Sumner, *W* and *W 334.*
Baltimora recta L.	15	MEX. Chiapas: 5 km N of Huixtla, *Roe 830;* Yucatán: 2 km S of Tekax, *Roe 1333.*
Bidens ostruthioides (DC.) Sch.-Bip.	12	MEX. Chiapas: 9 mi SE of San Cristóbal Las Casas, *Br 13426.*
Calea scabra (Lag.) Rob.	ca. 27	MEX. Chiapas: Lagunas de Montebello, *Roe 965.*
**Carramboa littlei* (Cuatr.) Cuatr.	19	VENEZUELA. Merida: La Carbonera, *Lopez* and *Ruiz 14013.*
Coreopsis integrifolia Poir.	13	S. CAR. Colleton Co. *R 20466.*

Eclipta alba (L.) Hassk.	11	MEX. Baja Calif. Sur: 1 mi N of Pescadero, *S* and *B 250.*
Encelia scaposa (Gray) Gray	18[b]	MEX. Chihuahua: 5 mi SW of Coyame, *P, Tu,* and *S 2476.*
Engelmannia pinnatifida T. & G.	9	TEX. Brewster Co. Alpine, *Sloan 20.*
Helianthella quinquenervis (Hook.) Gray	15	NEW MEX. Otero Co. Sierra Blanca, *R 20348.*
Helianthus annuus L.	17	TEX. Brewster Co. Alpine, *Sloan 21.*
**Helianthus paradoxus* Heiser	17	TEX. Pecos Co. N of Ft. Stockton, *Kolle 1415.*
Hymenopappus filifolius Hook. var. *cinereus* (Rydb.) I. M. Johnston	17	COLO. San Miguel Co. 27 mi NE of Egner, *Tu 8051;* NEW MEX. Torrance Co. 8 mi E of Willard, *P 2532.*
Hymenothrix wislizenii Gray	12	ARIZ. Cochise Co. Benson, *R 20341.*
Hymenoxys odorata DC.	11	MEX. Chihuahua: 10 mi S of Ojinaga, *P, Tu, Magill 2016;* 56 mi S of Ojinaga, *P, Tu,* and *Magill 2018.*
Iostephane trilobata Hemsl.	ca. 34	MEX. Chiapas: San Cristóbal las Casas, *Br 6742.*
Melampodium divaricatum (Rich.) DC.	12	MEX. Mexico: 3 km S of Temascaltepec, *Roe 1543;* Oaxaca: Oaxaca, *Br 12193;* Sacatapequez: 5 km N of jct. of roads 14 and 6, *Roe 825;* Sinaloa: 70 mi S of Mazatlán, *S* and *B 207.*
Melampodium gracile Less.	9	MEX. Yucatán: 25 mi S of Umán, *Roe 1317.*
Melampodium leucanthum T. & G.	10	TEX. Jeff Davis Co. near Brack's Tunnel, *S* and *B 312.*
Perymenium cf. *asperifolium* Sch.-Bip. & Klatt	ca. 15	MEX. Oaxaca: 24 mi NE of Sola de Vega, *Br 12281.*
Perymenium grande var. *nelsonii* (Robins. & Greenm.) Fay	ca. 30	MEX. Chiapas: 11 mi S of La Trinitaria, *Br 13267.*
**Perymenium klattianum* Fay	15	MEX. Vera Cruz: Cumbres de Acultizingo, *Roe 1278.*
Perymenium mendezii DC. var. *verbesinioides* (DC.) Fay	15	MEX.: 2 km N of Ixtapán, *Roe 1917.*
Perymenium cf. *purpusii* Brandeg.	15	MEX. Oaxaca: 3 km E of Ixtlán de Juarez, *Br 12227.*
Psilostrophe tagetina (Nutt.) Greene	16	TEX. Presidio Co. 2 mi NW of Marfa, *Foster 22.*
Psilostrophe tagetina (Nutt.) Greene	18	NEW MEX. Sandovall Co. 20 mi NE of Bernalillo, *Tu 8027.*
Ruizlopezia bromelioides (Cuatr.) Cuatr.	19	VENEZUELA. Mérida: Potreros de San Rafael, *Lopez* and *Ruiz 14017.*
Sanvitalia ocymoides DC.	8	MEX. Durango: 14 mi S of Rodeo. *S* and *B 367.*
Sanvitalia procumbens Lam.	8	MEX. Chiapas: 15 mi E of Cintalapa, *Roe 878.*

Simsia amplexicaulia (Cav.) Pers.	17	MEX. Chiapas: San Cristóbal las Casas, *Br 13283.*
Simsia calva (Gray & Engelm.) Gray	17	TEX. Brewster Co. Alpine, *Paul 1.*
**Simsia sanguinea* Gray	ca. 17	MEX. Oaxaca: 24 mi NE of Sola de Vega, *Br 12254.*
Verbesina encelioides (Cav.) Gray	17	TEX. Presidio Co. 31 mi SE of Marfa, *Sloan 15;* Marfa, *Foster 12.*
**Verbesina hypoglauca* Sch.-Bip.	ca. 17	MEX. Oaxaca: 3 km E of Ixtlán de Juarez, *Br 12250.*
Viguiera stenoloba Blake	ca. 33	TEX. Presidio Co. 31 mi SE of Marfa, *Sloan 13.*
Zinnia elegans Jacq.	12	MEX. Mexico: 56 km S of Temascaltepec, *Roe 1652.*
Zinnia littoralis Robins. & Greenm.	ca. 10	MEX. Sinaloa: 2 mi N of Mazatlán, *S* and *B 196.*
TAGETEAE		
Dyssodia pentachaeta (DC.) Robins.	8	TEX. Garza Co. 2.5 mi E of Post, *R 19300.*
PERITYLINAE		
**Perityle ajoensis* Todsen	17	ARIZ. Pima Co. Organ Pipe Cactus National Monument, *Todsen 2292* (seed progeny).
Perityle angustifolia (Gray) Shinners	ca. 68	TEX. Val Verde Co. ca. 25 mi N of Langtry, *P, P,* and *W 2953.*
**Perityle carmenensis* Powell	17	MEX. Coahuila: Maderas del Carmen, *Adamcewicz* and *Wendt 525* (seed progeny).
Perityle ciliata (L. H. Dewey) Rydb.	17	ARIZ. Santa Cruz Co. 3 mi SW of Patagonia, *Watson 234.*
Perityle emoryi Torr.	ca. 34–36	SOUTH AMERICA. Chile?, *Robres 13-XI-1973* (seed progeny).
Perityle emoryi Torr.	ca. 36	SOUTH AMERICA. Chile: Prov. Atacama: Caldera, *Richardson 2176* (seed progeny).
Perityle leptoglossa Harv. & Gray	17	MEX. Sonora: ca. 17 mi SE of Magdalena. *Van Devender* s.n. (seed progeny).
Perityle parryi Gray	17	TEX. Presidio Co. 2–3 mi NW of Fresno Mine, *P 2201.*
FLAVERIINAE		
Flaveria australasica Hook.	ca. 18	AUSTRALIA. *Demarz 5843* (seed progeny).
Flaverina bidentis (L.) Ktze.	18	DOMINICAN REPUBLIC. *Loigier 18314* (seed progeny).
Flaveria bidentis (L.) Ktze.	18	ECUADOR. *King 6925.*
**Flaveria* sp.	18	TEX. San Patricio Co. Port Aransas, Mustang Island, *P 2802;* Nueces Co. Padre Island, *Urbatsch 1547* (seed progeny).
Flaveria campestris J. R. Johnst.	18	NEW MEX. Socorro Co. E of Socorro, *P* and *P 3011;* San Acacia, *Valentine,* s.n. (seed progeny).

Flaveria chloraefolia Gray	18	MEX. Coahuila: ca 6 mi SW of Cuatro Ciénegas, *Tu 6168*.
**Flaveria* sp.	18	MEX. Puebla: 5 mi SW of Tehuacán, *Br 14189*.
Flaveria floridana J. R. Johnst.	ca. 18	FLOR. Hillsborough Co. Tampa, *Anderson* s.n. (seed progeny).
Flaveria linearis Lag.	18	FLOR. St. Lucie Co. 37 mi S of Ft. Pierce, *Luteyn 2885* (seed progeny).
Flaveria mcdougallii Theroux, Pinkava, & Keil	18	ARIZ. Mohave Co. Grand Canyon National Park, Cove Canyon, *Theroux 1675* (seed progeny).
Flaveria oppositifolia (DC.) Rydb.	18	MEX. Coahuila: 3 mi NW of Nadadores, *P* and *Tu 2710*.
Flaveria pringlei Gdgr.	18	MEX. Oaxaca: 30 mi NNW of Huajuapan de Leon, *Tu P-50;* Puebla: 5 km NW of Petalaleingo, *Rzedowski 28942* (seed progeny).
Flaveria pringlei Gdgr.	ca. 36	MEX. Oaxaca: 6 mi NW of Huajuapan de Leon, *Dillon 681* (seed progeny).
Flaveria pringlei Gdgr.	36	MEX. Puebla: 16 mi S of Esperanzá, *Hartman,* et al. *3834.*
Flaveria pubescens Rydb.	18	MEX. San Luis Potosi: 1 mi SE of Rio Verde, *Hartman,* et al. *3823* (seed progeny).
Flaveria ramosissima Klatt.	18	MEX. Puebla: 8 mi SE of Coxcatlan, *Anderson* and *Anderson 5340* (seed progeny).
**Flaveria* sp.	18	MEX. Sonora: near San Bernardo, *Martin 5* (seed progeny).
Flaveria trinervia (Spreng.) Mohr	18	TEX. Culberson Co. Rustler Springs, *P* and *P 3037*.
Sartwellia flaveriae Gray	18	TEX. Ward Co. 5 mi S of Pyote, *Sloan 66*. Reeves Co. 1 mi N of Pecos, *P 2927*.
Sartwellia mexicana Gray	18	MEX. San Luis Potosi: ca. 31 mi S of Matehuala, *S, Olsen,* and *P 820*.
Sartwellia puberula Rydb.	18	MEX. Coahuila: ca. 22 mi N of Monclova, *S, Olsen,* and *P 854*.
Senecioneae		
Bartlettia scaposa Gray	11	TEX. Hudspeth Co. Malone Hills, E of Tommy's Town, *P 2418*.
**Pelucha trifida* Wats.	19	MEX. Baja California: Isla San Pedro Martir, *Moran 21745*.
Raillardella argentea Gray	18	CALIF. San Bernardino Co. Mt. San Gorgonio, *R 11148*.
Raillardella muirii Gray	16	CALIF. Fresno Co. Tehipite Valley, *Howell 33960*.
**Senecio* cf. *chicharrensis* Greenm.	ca. 30	MEX. Chiapas: 17 km NW of Ocozocoautla, *Roe 891*.

Lactuceae		
Pinaropappus roseus Less.	9	TEX. Pecos Co. 5 mi SW of Iraan, *S 441;* Terrell Co. ca. 15 mi W of Longfellow, *P 2673;* Val Verde Co. just N of Langtry, *P 2680.*
Pinaropappus roseus Less.	9–15[d]	MEX. Coahuila: 104 mi NW of Múzquiz, *P, Pa,* and *I 1596.*
**Pinaropappus* sp. nov.	9	MEX. Coahuila: ca. 92 mi NW of Múzquiz, *P, Pa,* and *I 1593.*
Stephanomeria pauciflora (Torr.) A. Nels.	8	TEX. El Paso Co. Hueco Mts., *P* and *P 2991;* Hudspeth Co. 15 mi W of Van Horn, *S 463.*
Mutisieae		
**Acourtia nana* (Gray) Reveal & King	27	TEX. Hudspeth Co. 15 mi W of Van Horn, *S 462.*

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[a] Occasionally with one III and one I.

[b] Consistently with one round, probably centric, fragment.

[c] Consistently one I or fragment; also observed in a few cells were 17 II + 3 I; 18 II + 5 small fragments.

[d] Meiosis irregular, suggestive of triploidy on a base of $x = 9$, or apomixis.

ently a rare and localized species of South Carolina and Georgia, is a correction of an earlier publication in Solbrig et al. (1972) where the taxon was erroneously reported as *C. pubescens.* Cuatrecasas (1976) recently segregated *Carramboa littlei* and *Ruizlopezia bromelioides,* both $n = 19$ (Table 1), from *Espeletia* ($x = 19$).

Tageteae — The count of $n = 8$ would appear to establish a diploid base for *Dyssodia pentachaeta,* a species for which Strother (1969) lists only $n = 13$, 16, or 26. Keil and Stuessy (1975) have reported $n = 16$ for *D. pentachaeta* var. *belenidium.* A varietal identification has not been made for our collection. Strother (1969) records $n = 8$ for several other species of *Dyssodia.*

Peritylinae — In Table 1 the subtribe Peritylinae is positioned between the Heliantheae and Senecioneae (the classical but unnatural Helenieae is no longer recognized) in deference to those who do not wish to accept the taxon into homogeneous versions of tribes (Turner and Powell, 1977). *Perityle ajoensis* ($n = 17$, Table 1) was described (Todsen, 1974) after a monograph (Powell, 1973) of *Perityle* sect. *Laphamia,* to which it belongs, was completed. Todsen suggested a relationship of *P. ajoensis* to *P. palmeri* (= *P. tenella;* $n = 16$), *P. inyoensis* ($n =$ ca. 18) and *P. megalocephala* var. *megalocephala* ($n = 17$). In our view, *P. ajoensis* doubtless belongs with the "southwestern alliance" of seven species including the three above but is perhaps closest to *P. villosa* (a triploid from one previous count) and *P. inyoensis.* The $n =$ ca. 68 for *P. angustifolia* adds a new ploidy level to a species where $n = 17$ and $n =$ ca. 51 are previously known (Powell, 1968; Powell, 1973). The chromosome number for the newly described *P. carmenensis* ($n = 17$) is consistent with the base number established for sect. *Laphamia* (Powell, 1973) and with the base number of its related species *P. dissecta, P. castillonii,* and *P. lemmonii* (Powell, 1976). The two counts for *P. emoryi* (n = 34–36) listed in Table 1 are the first reports of this bicontinental taxon from South America. The principal distribution of *P. emoryi* is in Baja California and Sonora, Mexico, and in parts of the southwestern United States where hexaploid and tetraploid chromosome numbers of n = 50–56 (the common number throughout the range) and n =32–36 (from one collection in Baja California) are known (Powell, 1974). Raven (1963) suggested that *P. emoryi* reached Chile and Peru by long-distance dispersal (in late Pliocene or Pleistocene), a subject which is discussed further by Powell (1974). The present chromosomal data suggest the possibility that South American *P. emoryi* (n = 34–36) might have originated from Baja California *P. emoryi* (n = 32–36) at a time when tetraploid populations were more widespread.

Flaveriinae — The species of *Flaveria* and its allied genera *Sartwellia* and *Haploësthes* are consistently $n = 18$, except for a single case of polyhaploidy ($n = 9$) in *F. campestris* (Anderson, 1972), and the two tetraploid ($n = 36$) collections of *F. pringlei* in Table 1. The latter species, related to *F. angustifolia* and *F. vaginata*, is also diploid (Table 1). The three taxa listed as *Flaveria* sp. are undescribed. With the data presented here and elsewhere (Turner, 1975; Turner, 1971; Powell and Powell, 1977) a base number of $x = 18$ seems certain for the Flaveriinae. Chromosome numbers are lacking for only four of the 21 species of *Flaveria* (*F. angustifolia, F. intermedia, F. robusta,* and *F. vaginata*); chromosome numbers are known for all four species of *Sartwellia* (Table 1) and for all but one taxon of *Haploësthes* (*H. fruticosa;* Turner, 1975).

Counts for the Flaveriinae in Table 1 were accumulated in connection with a forthcoming revision of *Flaveria* by the senior author. The study has revealed in the earlier literature two chromosome number reports that were attributed erroneously to certain species, and these are corrected as follows: *F. anomala, Graham & Johnston 4818,* reported as *F. ramosissima* in Turner and Johnston (1961); *F. anomala, Powell & Edmondson 542,* reported as *F. ramosissima* in Powell and Turner (1963).

Senecioneae — The count in Table 1 for *Bartlettia scaposa* ($n = 11$) is consistent with the only previous report for the species (from Mexico), which is distributed almost entirely in Chihuahua and Durango, Mexico (Powell, 1963). *Pelucha trifida* ($n = 19$) is an anomalous genus with uncertain tribal affinity, but its chromosome number and morphology suggest that it might belong in a group with several other North American Senecioid genera with $x = 19$.

Mutisieae — The chromosome number of *Acourtia* (= *Perezia*) *nana* ($n = 27$) is the same as its two geographically related species *A. wrightii* and *Perezia runcinata* and consistent with the base number of $x = 9$ so far indicated for *Acourtia* (Powell and Sikes, 1970).

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NOTES AND NEWS

New Plant Distribution Records from the Southwestern United States and Northern Mexico. — Recent collecting activities in the Southwestern United States and northern Mexico have turned up several new or otherwise significant plant distribution records. Some of these have developed significance after passage of the Endangered Species Act and the subsequent publication of state lists of threatened or endangered species.

FABACEAE

Astralagus musimonum Barneby. Arizona, Mohave Co., ca. 30.5 km S of St. George, Utah, at 1350 m on the W slope of Seegmuller Mountain above Mokiah Wash, on calcareous bank along road in piñon-juniper community, *R. Spellenberg, R. Delson, J. Syvertsen 3182,* 20 May 1973.

In *Arizona Flora* (T. H. Kearney and R. H. Peebles. 1951. Univ. Calif. Press) this species was listed as possibly occurring within Arizona, the record based on a collection from the same vicinity *(Ripley and Barneby 4321)* as our recent collection. Their collection was immature and Barneby was uncertain of the correct identity of that material. In the supplement bound with a later edition of *Arizona Flora* (1964: p. 1054) Barneby concluded their collection was misidentified, actually representing *Astragalus amphioxys* Gray var. *modestus* Barneby. He maintained this opinion in his monumental "Atlas of North American *Astralagus*" (1964. Mem. New York Bot. Gard. Vol. 13). Our collection "keyed" easily to *A,. musimonum* since it had good fruit and a few flowers. The identification was confirmed by Barneby. In our correspondence regarding the collection he noted that his and Ripley's earlier collection had been lost. The species appears in the 7/1/75 Federal Register as "threatened" in Nevada.

Petalostemum scariosum (Wats.) Wemple. New Mexico, Socorro Co., 1.6 km S of La Joya Game Refuge exit on IH-25, *R. Spellenberg, J. M. Willson 4228,* 8 Jul 1976.

The species is listed as "endangered" in New Mexico in the 6/16/76 Federal Register. In a recent revision of the genus (D. K. Wemple, 1970, Iowa State Coll. J. Sci. 45:1–102) all collections cited were made about 70 years ago from only two stations near the Rio Grande in Bernalillo and Valencia counties. However, we find the species to be more widespread, occurring from the Laguna Indian Reservation in eastern Valencia Co. to the Sandia Mountains in central Bernalillo Co., southward to east of San Antonio in central Socorro Co. The species may have been orig-